National Cancer Institute

caBIG cancer Biomedical Informatics Grid®

"Oncology-Specific Electronic Health Records"
caBIG® Podcast Network

Moderator:

Welcome to the caBIG® podcast network. In this podcast, we will discuss how the cancer community is working to customize electronic health records, or EHR's. Since 2007, the American Society of Clinical Oncology, or ASCO, has been working with caBIG® and the National Community Cancer Center Program to develop an oncology-specific EHR.

Joining us today are Doctors Ken Buetow and Peter Yu. Doctor Buetow is a geneticist and head of the National Cancer Institute's bioinformatics program, and visionary for its caBIG® effort. Doctor Yu is chair of ASCO's EHR working group, as well as a practicing oncologist at the Palo Alto Medical Foundation. Welcome to you both and thank you for joining us today.

Doctor Yu, could you tell us a little bit more about EHR's, how they work and why we need an oncology-specific EHR.

Dr. Yu:

Absolutely, it would be my great pleasure. The EHR, being a patient-centered document, collects the data about the patient that really defines the personal healthcare of that patient. So, with that information, we know the history, the personal history, the family history, the treatment history, the laboratory molecular history, that allows us to define that patient in his or her own unique way.

We need an oncology-specific EHR because of the work flows involved in oncology and cancer care. The key functionality of an oncology EHR is the chemotherapy administration – that is what distinguishes our day-to-day operations most clearly from other medical specialties.

With an electronic EHR, that entire process of ordering the chemotherapy, administering the chemotherapy, documenting and billing – which are all critical functions for the survival of a practice and the safety of a patient – are greatly enhanced by having an EHR. This is probably the greatest benefit of an oncology EHR to the practitioner on a day-to-day basis.

Moderator:

Dr. Yu, can you explain a bit more about the Clinical Oncology Requirements for EHR, known as the CORE project and how you are involved?

Dr. Yu:

I'd be very happy to talk about the CORE project, not only for the work that I think it has done, but I believe that it is a model for how the government agencies such as the NCI can collaborate with specialty societies and providers in a truly meaningful way.

The CORE project was designed to start from the point of view of the end-user, the healthcare provider, to see what is needed to get the job done in the best, most efficient, safest manner. ASCO has the ability to look at the perspective of the end-user in terms of what is needed for an oncology EHR, but we lack some of the technical understanding of how to translate that in a manner that software engineers could write code against and create a product that would actually deliver on what we need.

It was our great fortune to be able to link with the NCI and the NCI NCCCP program to begin to define the functionalities better.

Moderator:

And Dr. Buetow, what role does caBIG® have in the development of this oncology-specific EHR?

Dr. Buetow:

caBIG®, the Cancer Biomedical Informatics Grid, is working to create an interoperable framework that connects all of the components of the entire cancer community — that includes the care delivery universe, the biomedical research universe and the regulatory domain. We have to be focusing on interoperability and having the appropriate definitions of standards, technologies, across the entire ecosystem. So our role in working with the American Society of Clinical Oncology has been to provide the technical expertise as well as the caBIG® framework for defining and specifying what these electronic health records would look like so that they can interoperate across the entire oncology community.

Moderator:

What will be the impact on the cancer community once we have implemented an oncology-specific EHR?

Dr. Buetow:

Well, we think having an oncology-extended EHR is going to be transformational to the research endeavor. It has tremendous application in terms of reducing the cost of doing biomedical research. If one has access to these electronic collections of information, recruiting into clinical trials is now simply the process of accessing these registries and finding and matching patients, and requesting their participation. But it also is transformational on the flip-side in terms of how research can then come back into care. By having this interconnection we can transform the linear process of discovery, development, and delivery into a ”virtuous cycle” in which the observations and care drive next-generation research questions, and the answers to those next-generation research questions are immediately in the hands of practicing oncologists.

Moderator:

Dr. Yu, I wondered if you can talk a little bit about how patients are going to benefit from the oncology-specific EHR?

Dr. Yu:

One of the ways will be through patient portals, where patients will have an ability to reach into the EHR and see their own information, and access information and access educational tools. So, we envision having a variety of patient education tools that patients can reach into to learn about their disease, learn about their treatment options, learn how to take care of side effects that they may encounter from the treatments and to help coordinate their care.

Dr. Buetow:

And to further extend that, I think one of the really exciting, emergent properties is the ability to be doing data-driven decision making. Everything in our care practices, both for consumers as well as for physicians, will be based on the experience of thousands of different physicians and hundreds of thousands of different cancer patients.

I think what we're seeing is quite exciting recognition that the boundaries between care and research have to blur. As we move into a learning healthcare system where all of the physicians are engaged in discovery and learning, we're going see a transformation.

Moderator:

Doctor Peter Yu and Doctor Ken Buetow, thank you for your time today.

For more information on the CORE collaboration or on oncology-specific EHRs, please visit the ASCO website at EHR.ASCOexchange.org or the caBIG® website at http://caBIG.cancer.gov.